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Carter Industrials Site
Detroit, Michigan

I. Introduction

This Preliminary Close Out Report documents that the United States Environmental Protection Agency (U.S. EPA) completed all construction activities for the Carter Industrials Site in Detroit Michigan in accordance with Procedures for Completion and Deletion of National Priorities List Sites and Update (OSWER Directive 9320.2-3C). U.S. EPA and the Michigan Department of Environmental Quality (MDEQ) conducted a pre-final inspection on February 21, 1996, and determined that the Potential Responsible Parties (PRPs) constructed the remedy in accordance with the Remedial Design (RD) plans and specifications. The PRPs have initiated activities necessary to achieve performance standards and site completion.

II. Summary of Site Conditions

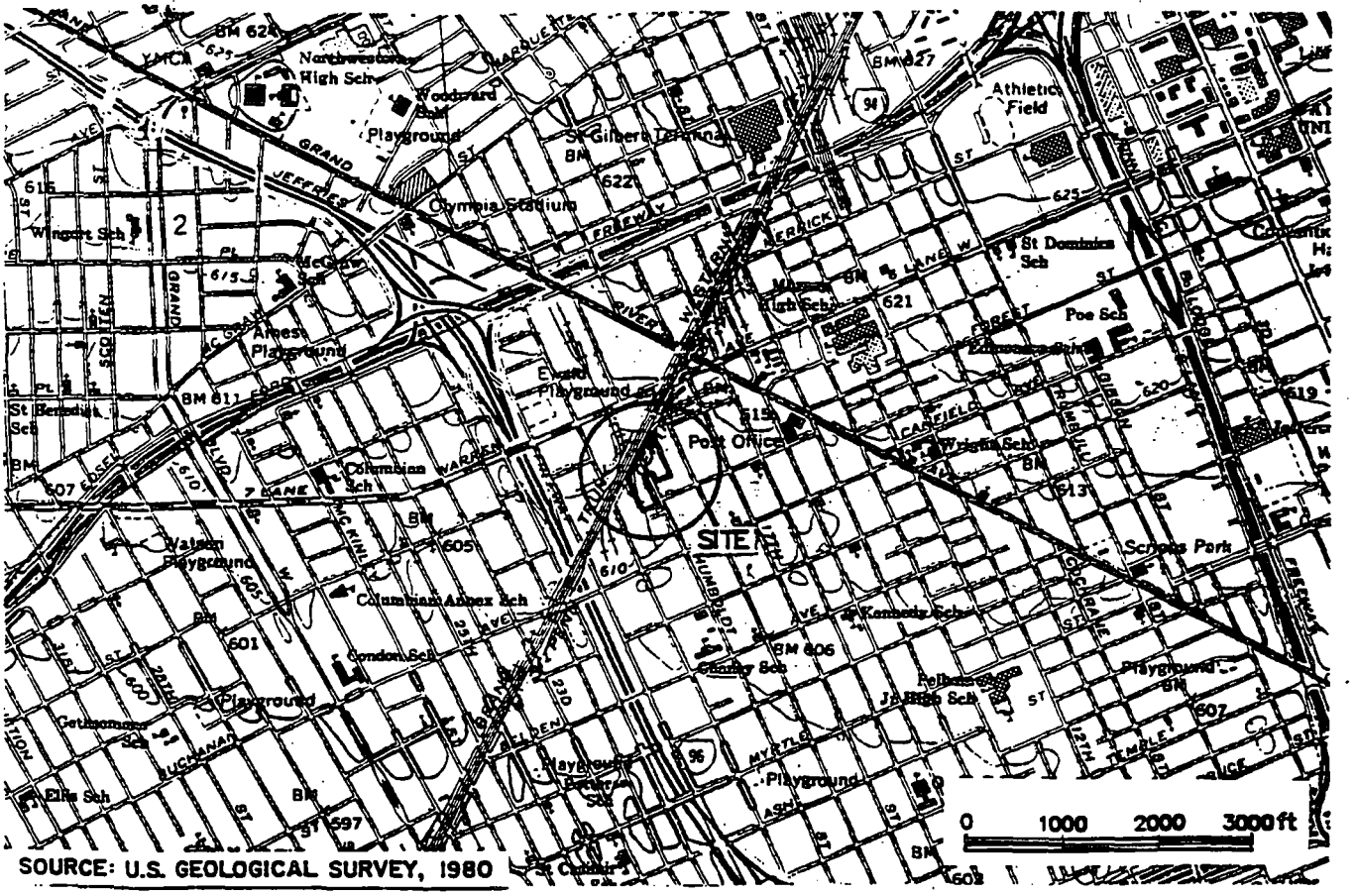
Background

The Carter Industrials Site is located at 4690 Humboldt Street in Detroit, Michigan. The Site encompasses this and adjacent properties. It is situated approximately ½ mile southeast of the intersection of interstate highways 96 and 94.

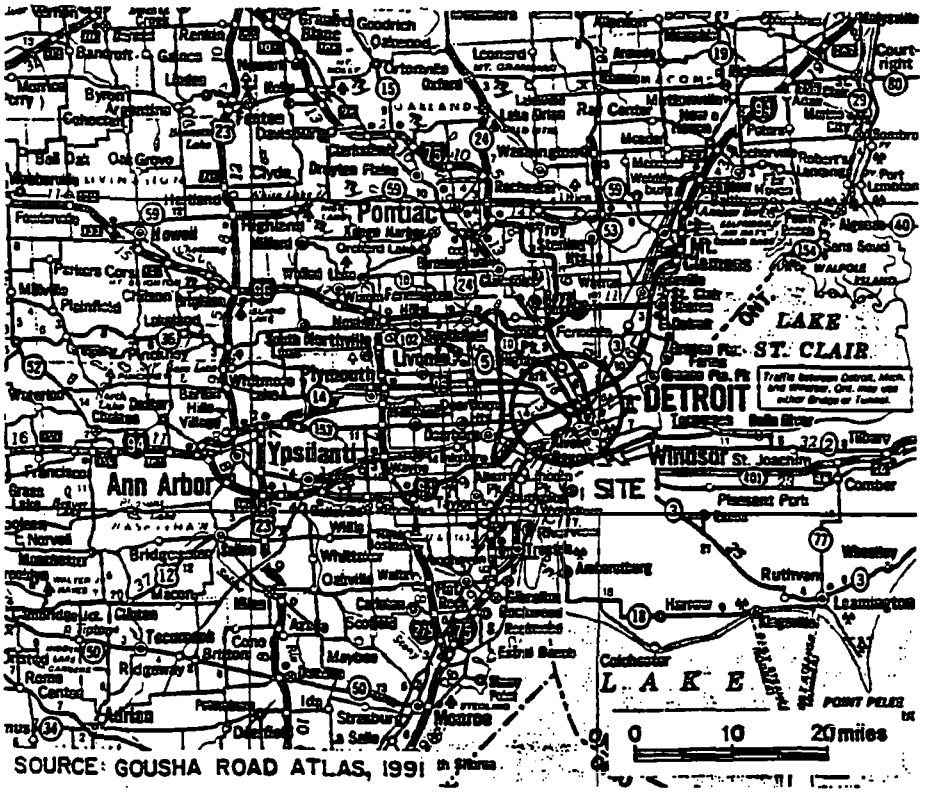
The Site covers approximately 3.5 acres and contained seven piles of PCB-contaminated soil and debris (approximately 46,000 cubic yards). Several structures, including two buildings, two smelters and an incinerator were located on Site. Several underground storage tanks containing a gasoline and water mixture were also located on the Site.

As shown on Figure 1, the Site is located in a mixed residential and light industrial neighborhood near downtown Detroit. Directly to the north are branches of the Grand Trunk Western and Penn Central railroads. The Site is bordered to the south by Forest Street, along which both residential and commercial properties are located. Immediately to the east is a residential area, and to the west is vacant property. There are two businesses which are operating on the Site perimeter (Figure 2): an auto parts dealer and a scrap yard. The 1980 Census tracts which immediately adjoin the Carter Site reported a total population over 21,000 persons.

The nearest body of surface water is the Detroit River which is located approximately 6000 feet south of the Site. The Site is located more than 2 miles from a 5-acre coastal wetland and more than 1 mile from a 5-acre fresh-water wetland. There are no designated Michigan Significant Habitats, agricultural land, or historic or landmark Sites directly or potentially affected.



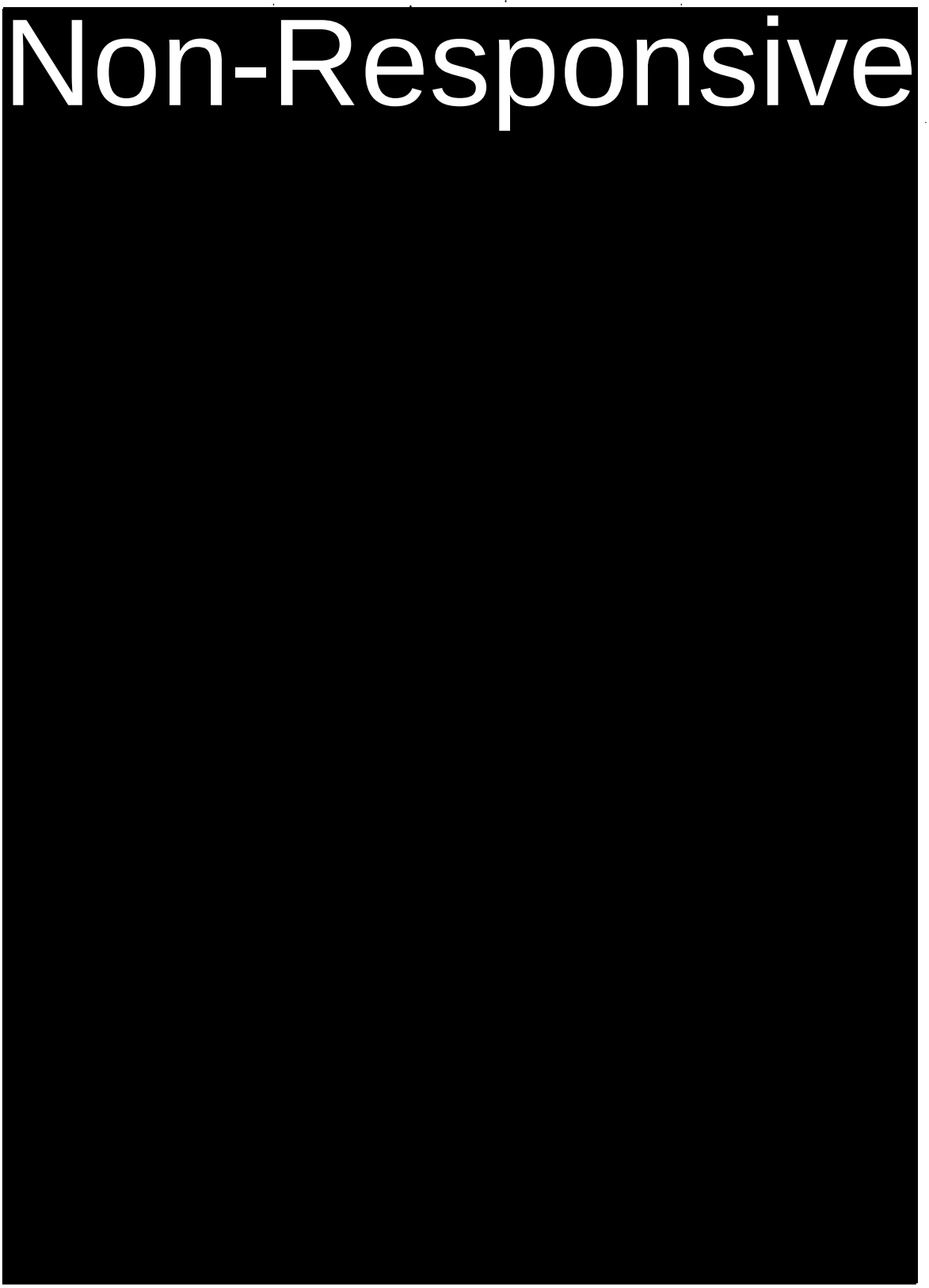
SOURCE: U.S. GEOLOGICAL SURVEY, 1980



SOURCE: GOUSHA ROAD ATLAS, 1991

Figure 1

SITE LOCATION
REMEDIAL CONSTRUCTION ACTIVITIES
CARTER INDUSTRIALS SITE
Detroit, Michigan


Non-Responsive

Site History

From 1966 to 1986, the Carter Site was used to store and salvage scrap metal. From 1966 to 1971, the Site was operated by Spector-Carter Metal, while from 1971 to 1986, Carter Industrials, Inc. operated the Site. A portion of the scrap metal items accepted at the Carter Site included electrical capacitors and transformers.

During salvage operations at the Site, dielectric fluids containing PCBs were spilled from electrical capacitors and transformers, contaminating on-site soil. Commercial, municipal and residential properties adjacent to the Site were contaminated by direct runoff of spilled material, contaminated storm water runoff, wind-blown dust, and tracking of spilled material and contaminated soils by vehicular traffic.

In May 1986, the Michigan Department of Natural Resources (MDNR) collected soil samples at the Site, revealing PCB contamination at concentrations of up to 510,000 parts per million (ppm). On June 4, 1986, MDNR referred the Site to the Emergency Response Program of the U.S. EPA (Region V).

A chronology of events which occurred after referral to the Emergency Response Program is summarized below.

June 5, 1986 - Site inspection by Ralph Dollhopf, OSC, confirmed that severe contamination existed at the Site.

June 6, 1986 - U.S. EPA's Technical Assistance Team (TAT) started an extent of contamination study involving collection and analysis of over 2000 samples and identification of on-site and off-site areas requiring clean-up.

June 6, 1986 - U.S. EPA's Region V Emergency Response Program initiated a removal action to confine PCB contamination to the Carter Site. U.S. EPA's activities consisted of the following major tasks:

> Stabilization of uncontrolled Site perimeters was accomplished by pushing highly-contaminated areas of the perimeter back towards the Site interior in order to reduce any further migration of contaminants. In addition, some areas of the Site surface were cleared of debris to accommodate the staging of the consolidated contaminated soils from off-site areas.
>
> Contaminated soils and debris from the surrounding neighborhood were excavated and consolidated into waste piles on-site.

Identifiable PCB items (e.g. capacitors and oils) were removed from the Site for off-site disposal (incineration).

Larger pieces of scrap metal found on the surface of the Site were decontaminated and removed from the Site.

Municipal streets and alleys in an approximately four square block area surrounding the Site were decontaminated.

Several alleyways adjacent to the Site were unable to be cleaned adequately and were repaved.

The Site was graded to direct runoff toward the southeast section of the Site where a system of interception trenches, collection tanks, and mixed media filter units collect and treat the runoff water (Figure 3).

A 6-foot chain-link cyclone fence topped with three strands of barbed wire was erected around the Site to prevent unauthorized entry.

Fall 1986 - The U.S. EPA and MDNR staff sampled rain gutter sediments and debris in the vicinity of the Carter Site. The purpose of this sampling was to determine if PCBs had been transported aerially into the surrounding community. These data showed a general radial pattern with PCB levels tending to decrease in a given direction as the distance from the Site is increased. PCB levels for the rain gutters sampled ranged from non-detectable to 38 milligrams per kilogram (mg/kg).

Fall 1986 - U.S. EPA began identifying Potentially Responsible Parties through analysis of Site records and issuance of CERCLA Section 104(e) information requests.

October 1986 - The TAT took samples from the waste piles, surface soils, subsurface soils, groundwater, and a seep encountered below the surface. PCBs and heavy metals were found in on-site ash and soils.

October 1986 - Two buildings and an incinerator located on-site were sampled revealing concentrations of PCBs ranging from 6 to 100 micrograms per 100 square centimeters for wipe samples and 85-900 ppm for floor sweep samples.

October 1986 - A Site inspection report was prepared by the MDNR. Following this, the Site was evaluated for the National Priorities List (NPL) using the "Uncontrolled Hazardous Waste Site Ranking System" (HRS). The Site received a score of [redacted], making it eligible for inclusion on the NPL.

October 1986 - Sampling undertaken by the MDNR and the City of Detroit in

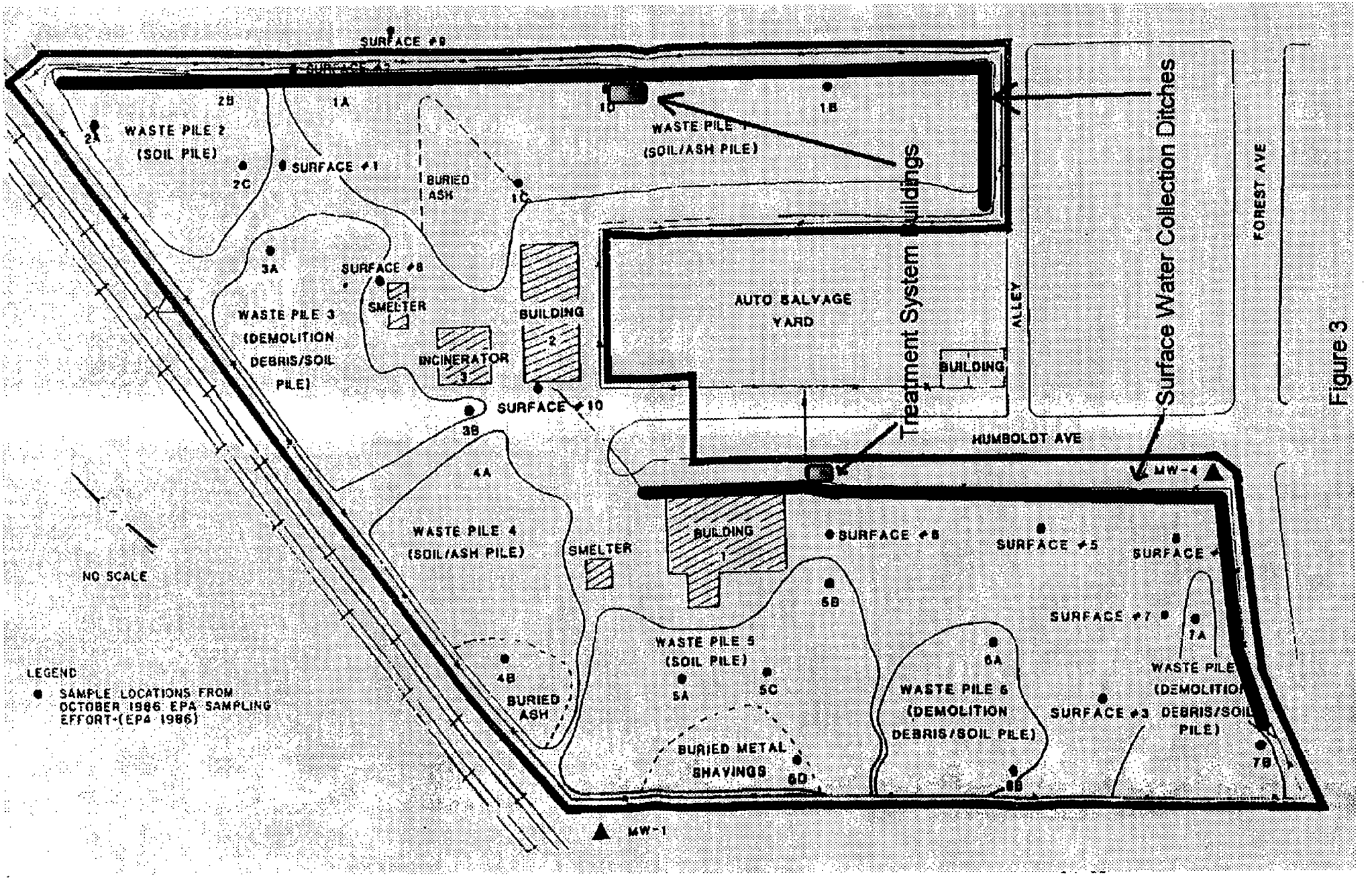

SURFACE #9
SURFACE #8
2B
1A
1D
1B
WASTE PILE 2
(SOIL PILE)
2A
2C
SURFACE #1
WASTE PILE 1
(SOIL/ASH PILE)
BURIED
ASH
1C
Surface Water Collection Ditches
FOREST AVE
3A
SURFACE #6
SMELTER
BUILDING
2
AUTO SALVAGE
YARD
Treatment System Buildings
ALLEY
WASTE PILE 3
(DEMOLITION
DEBRIS/SOIL
PILE)
INCINERATOR
3
BUILDING
SURFACE #10
3B
HUMBOLDT AVE
MW-4
4A
WASTE PILE 4
(SOIL/ASH PILE)
SMELTER
BUILDING
1
SURFACE #6
SURFACE #5
SURFACE #4
NO SCALE
6B
SURFACE #7
7A
WASTE PILE 5
(SOIL PILE)
6A
4B
BURIED
ASH
5A
5C
WASTE PILE 6
(DEMOLITION
DEBRIS/SOIL PILE)
WASTE PILE 7
(DEMOLITION
DEBRIS/SOIL
PILE)
SURFACE #3
BURIED METAL
SHAVINGS
6D
6C
7B
LEGEND
SAMPLE LOCATIONS FROM
OCTOBER 1986 EPA SAMPLING
EFFORT-(EPA 1986)
MW-1

Figure 3

September and October of 1986 detected PCB contamination at levels up to 4900 mg/kg in the city sewer lines immediately adjacent to the Carter Site and along the connecting 18th Street line to the Detroit River.

December 1986 - An Engineering Evaluation/Cost Analysis (EE/CA) was completed. The EE/CA's screening and selection process for evaluation of the alternative remedial technologies was conducted in accordance with the procedures outlined in the draft "Proposed Alternative Treatment/Disposal Technology Guidance for Removal and Expedited Response Actions".

Fall 1986 - MDNR removed contaminated soil in the residential areas with contamination levels between 10 and 50 mg/kg. Contaminated soil was disposed of off-site at a RCRA landfill in Ohio.

10/86 to 10/88 - Despite security fencing, 24-hour armed guards, and stepped up Detroit Police patrols, the Site was broken into repeatedly after the U.S. EPA removal action began. Vandals gained access by removing security fencing, thereby providing unrestricted access to the Site by children living nearby. Vandals repeatedly removed contaminated scrap metal, knocked out walls and broke into contaminated buildings, and vandalized three large transformers on the Site. In addition, vandals set fires to the vegetative cover (grass) which was planted on the waste piles to reduce migration of contamination.

June 24, 1988 - The Site was proposed for inclusion on the NPL.

October 1988 - U.S. EPA acted to improve Site security by repairing vandalized fencing. U.S. EPA also attempted to reduce the attractiveness of the Site to vandals by removing as much scrap metal and debris as possible.

November 1988 - An underground fuel storage tank was identified at the Site. The contents of the tank consists of a 50/50 mixture of gasoline and water.

Jan. 24, 1989 - An Endangerment Assessment was completed by the U.S. EPA. This assessment revealed that persons in the vicinity of the Site may have up to 4 x 10E-02 increased cancer risk for inhalation of volatilized PCBs, as well as a significant non-carcinogenic hazard.

Jan. 24, 1989 - U.S. EPA issued an Administrative Order to 30 PRPs pursuant to Section 106 of CERCLA, which required that the respondents undertake interim Site safety measures, such as fence maintenance, run-off collection and treatment system operation and maintenance, and provision of Site security. This order also called for the Respondents to undertake one of the response options which had been reviewed in the EE/CA after opportunity for public review and comment on the PRP's proposal

and workplan.

Feb. 8, 1989 - The USEPAand MDNR held a conference regarding the 106 Order at the Detroit Public Library. The Respondents requested that they be allowed to have sufficient time to coordinate and form a steering committee, review the administrative record, and put together a proposal as to how they were going to proceed.

Feb. 28, 1989 - EPA issued an amended order which extended the effective date until April 10, 1989.

March 23, 1989 - The EPA and MDNR held a Technical Conference with the PRP's technical consultant regarding feasibility of the options contained in the EE/CA.

March 31, 1989 - The Site was listed on the NPL.

April 5, 1989 - The EPA and MDNR held a conference with PRPs to discuss PRP proposal. Proposal involved capping of all soil and debris in place. EPA/MDNR advised Respondents that this was not sufficiently protective of human health and the environment.

May 5, 1989 - 2nd amendment of 106 Order (Bifurcated) was issued to require the respondents to immediately undertake interim Site stabilization measures, including: 24-hour security guards posted at the Site; laying geotextile over the waste piles to stabilize the Site; hydroseeding operations; assumption of the responsibility for the run-off collection and treatment system, as well as all utilities and services at the Site. The bifurcated amended 106 order also provided a 2nd effective date tied to U.S. EPA's selection of a response alternative after an opportunity for public review and comment on the proposed plan.

May 25, 1989 - PRPs proposed to excavate and dispose of soils containing PCB levels over 50 ppm in an off-site landfill and to cap all the rest. Respondents were advised that cleanup level would be at most 10 ppm due to proximity of residences, as set forth in the PCB Spill Policy.

June 1, 1989 - Geotextile cover and hydroseeding operations completed by Respondents.

August 1989 - Feasibility Study of remedial alternatives commenced by U.S. EPA.

May 1990 - Treatability Study Sampling Program conducted by Conestoga-Rovers and Associates on behalf of PRPs.

Fall 1990 - Treatability Studies of B.E.S.T. solvent extraction and X-Trax (Low

Temperature Thermal Desorption) technology were completed for PRPs.

April 19, 1991 - Feasibility Study and Proposed Plan issued to public and comment period commenced.

May 2, 1991 - Public Meeting on Proposed Plan held in Detroit.

June 18, 1991 - 60 day Public Comment Period Closed.

July 26, 1991 - Several provisions of the 106 Order were rescinded in keeping with U.S. EPA's decision to pursue a negotiated settlement with the PRPs.

September 18, 1991- The United States Environmental Protection Agency (EPA) signed a Record of Decision (ROD) selecting low-temperature thermal desorption (LTTD) as the remedy for PCB contamination at the Carter Industrials Superfund Site in Detroit, Michigan. The ROD called for an LTTD unit to be constructed on-site through which contaminated soil would have been treated and contamination removed. Treated soil that did not meet stipulated cleanup levels was to have been placed in a landfill constructed on the Carter property. In September 1992, 14 potentially responsible parties ("the Carter Group") signed a consent decree under which they agreed to implement the remedy EPA selected.

July 1, 1994 - The Carter Group submitted a petition to EPA asking that the Agency amend the 1991 ROD to change the remedy. The U.S. EPA signed a ROD Amendment on February 28, 1995.

The Remedial Action Specified in the amended ROD is:

1) Excavation of soil on the Carter Site and from designated properties in the neighborhood near the Site containing one ppm or more PCBs.

2) Demolition of contaminated buildings on the Site.

3) Disposal of contaminated soil and debris at an approved, permitted, off-site landfill.

4) Stabilization of material containing high concentrations of lead prior to disposal.

5) Removal of an underground storage tank and its contents from the Carter Site in accordance with Michigan regulations.

7) Restoration of areas where demolition or excavation take place.

8) Implementation of all existing site safety measures, including fence, security guards, operation and maintenance of surface water runoff collection and treatment system until completion of the remedial action.

The Carter Group signed an amended Consent Decree in April, 1995, and the PRPs agreed to performed the Remedial Design and Remedial Action (RD/RA). The RD was conducted in conformance with the approved ROD. The RA was initiated on August 1, 1995. The PRPs' subcontractor conducted remedial activities as planned, and no additional areas of contamination were identified. U.S. EPA and the State conducted a pre-final inspection on February 21, 1996, which included a description and schedule for correcting construction items by the subcontractor. RA activities were completed according to the amended ROD design specifications:

Completed excavation of soil on the Carter Site and from designated properties in the neighborhood near the Site containing one ppm or more PCBs.

Completed demolition of contaminated buildings on the Site.

Completed the disposal of contaminated soil and debris at approved, permitted, off-site landfills.

Completed stabilization of material containing high concentrations of lead prior to disposal.

Completed the removal of two underground storage tanks and their contents from the Carter Site in accordance with Michigan regulations.

The Carter Group provided for maintenance of all existing site safety measures, including fence, security guards, operation and maintenance of surface water runoff collection and treatment system during remedial activities.

The off-site areas where excavation took place were determined to be clean after confirmatory sampling and then were backfilled as needed, and resodded to restore them to their prior condition.

The on-site areas where demolition and excavation took place have been backfilled to grade, covered with topsoil, and reseeded.

Demonstration of Cleanup Activity - Quality Assurance and Quality Control

Activities at the site were consistent with the ROD, and all work plans were issued to contractors for design and construction of the RA, including sampling and analysis. The RD Report, including a Quality Assurance Project Plan, incorporated all U.S. EPA

and State quality assurance and quality control (QA/QC) procedures and protocol. U.S. EPA analytical methods were used for all validation and monitoring samples during RA activities. Sampling of soil followed the U.S. EPA protocol Test Methods for Evaluation of Solid Wastes, Physical/Chemical Methods.

The QA/QC program used throughout the RA was rigorous in conformance with U.S. EPA and state standards; therefore, U.S. EPA and the State determined that all analytical results are accurate to the degree needed to assure satisfactory execution of the RA and are consistent with the ROD and the RD plans and specifications.

Activities and Schedule for site completion

The following activities will be completed according to the following schedule:

Task	Estimated Completion	Responsible Organization
Complete Punch List Items	June 10, 1996	PRP Contractor
Complete Final Inspection	June 28, 1996	EPA/State
Approve RA Report	August 30, 1996	EPA/State/PRPs
*Sewer completion Notification	September 30, 1996	PRP Contractor
Begin Deletion Process	January 30, 1997	EPA

*The PRP's have voluntarily agreed to remediate off-site sewer lines. This action was not required by the Record of Decision (ROD) or Consent Decree (CD), it is a voluntary action. EPA will wait for the activity to be completed before proceeding with the site delisting process.

Five Year Review Not Required

This remedial action has resulted in no hazardous substances remaining at the site above health-based levels. Consequently, no Five Year review pursuant to CERCLA section 121(c) will be required.

W. E. Muno

William E. Muno, Director
Superfund Division

6/11/96

Date